

of drum 4 and formed in finger 12 below apron or flange 16. The side ramp may have a variable angle of incline in relation to axis XX,  $45^\circ$  for example.

In the earlier design of a drum used until now, illustrated in Figure 5B, lead 15 on cable 3a (or 3b) achieved access by radial insertion in slot 22 provided in the base of drum 23. This slot 22 is roughly parallel to lengthwise axis XX of drum 23 and extends to drum height  $h$  plus the width of the first cable insertion groove.

Compared to this earlier mode of embodiment, it is clear that the advantage of drum 4 from Figures 5A, 6, and 7 resides in the fact that radial insertion of the lead in slot 22 is replaced by insertion at an angle to axis XX in opening 17 provided in flange 16, and in finger 12, which do not exist in prior drum 23. Such a design therefore permits a reduction in the total height of a drum having a height of  $h$ , for the same number of grooves, insertion of lead 15 being achieved as shown in Figures 6 and 7 by sliding it on ramp 18 then engaging the lead behind one or the other of two walls 19 (Figure 7). Thus, the drum and the device as a whole are made more compact.

Naturally, the angle of ramp 18 may vary more or less on either side of  $45^\circ$ , which is given by way of example only.

#### Claims

1. Automobile vehicle window-raising device comprising a winding drum (4) for two cables (3a, 3b), a hood (6) to support said drum and partly surround the latter while leaving part of its circumference accessible, a hood attachment and drum support plate (5), and a brake box (8) provided with a crank to drive the drum and means to prevent reversal of the drum rotation, the hood being further shaped so as to form on its base contiguous with the plate a tunnel (13) that with the drum defines a peripheral passage (14) to permit manual introduction of a lead (15) to engage a cable (3a or 3b) roughly one turn around the drum, characterized in that the base of the drum is extended by a flange (16) that forms a unit with the drum and whose width is roughly equal to that of the tunnel, said flange serving to support and slide the cable lead.

2. Window-raising device according to Claim 1, characterized in that the flange (16) on drum (4) is continuous except for an opening (17) for insertion of the cable (3a or 3b) lead (15).

3. Device according to Claim 2, characterized in that the opening (17) in the flange (16) is limited by an outer side ramp (18), angled to the axis of rotation (XX) of the drum (4), said ramp being designed between walls (19) that are roughly parallel to the axis of the drum, formed below the flange (16) in a finger (12) adapted to work with complementary fingers (11) of the crank (9) which is coaxial with the drum.

4. Device according to Claim 3, characterized in that the side ramp (18) is angled at about 45 degrees to the axis (XX) of the drum (4).

TJS  
a2

add  
a1

add  
8/7  
add  
15/7